**Class Set**

**Polyatomic Ions**

NH4 + Ammonium CN - Cyanide ClO4 - Perchlorate

C2H3O2 - Acetate Cr2O7 -2 Dichromate O2 -2 Peroxide

AsO4 -3  Arsenate H2PO4 - Dihydrogen Phosphate MnO4 - Permanganate

AsO3 -3 Arsenite H2PO3 - Dihydrogen Phosphite PO4 -3 Phosphate

HCO3 - Bicarbonate Fe(CN)6 -3 Ferricyanide PO3 -3 Phosphite

HSO4 - Bisulfate Fe(CN)6 -4 Ferrocyanide SiO3 -2 Silicate

HSO3 - Bisulfite OH - Hydroxide SO4 -2 Sulfate

BO3 -3 Borate ClO- Hypochlorite SO3 -2 Sulfite

CO3 -2 Carbonate HPO4 -2 Hydrogen Phosphate CNS - Thiocyanate

ClO3 - Chlorate HPO3 -2 Hydrogen Phosphite S2O3 -2 Thiosulfate

ClO2 - Chlorite NO3 - Nitrate IO3- Iodate

CrO4 -2 Chromate NO2 - Nitrite IO4- Periodate

CNO - Cyanate C2O4 -2 Oxalate

**Transition Metals**

Chromium +2 Chromous Chromium (II) Iron +2 Ferrous Iron (II)

+3 Chromium (III) +3 Ferric Iron (III)

+6 Chromic Chromium (VI)

Manganese +2 Manganous Manganese (II)

Cobalt +2 Cobaltous Cobalt (II) +3 Manganese (III)

+3 Cobaltic Cobalt (III) +4 Manganese (IV)

+7 Manganic Manganese (VII)

Copper +1 Cuprous Copper (I)

+2 Cupric Copper (II) Mercury +1 Mercurous Mercury (I)

+2 Mercuric Mercury (II)

Gold +1 Aurous Gold (I) Nickel +2 Nickelous Nickel (II)

+3 Auric Gold (III) +3 Nickelic Nickel (III)

Some other representative metals are not transition metals, but also have multiple charges and are named in the same way:

Lead +2 Plumbous Lead (II)

+4 Plumbic Leand (IV)

Tin +2 Stannous Tin (II)

+4 Stannic Tin (IV)

Bismuth +3 Bismuthous Bismuth (III)

+5 Bismuthic Bismuth (V)

Antimony +3 Antimonous Antimony (III)

+5 Antimonic Antimony (V)

Also, several transition metals only have one charge possible:

Cadmium Cd+2 ‌ Silver Ag+ Zinc Zn+2